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HISTORICAL STUDY OF DRAVIDIAN *r̤* AND *l̤*

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> " The question of the origin of South Indian Characters is one which requires, and which will probably reward, further research. "
>
> —Caldwell

Classified under the same family as they are, the difference between Tamil on the one hand and the other Dravidian languages Telugu, Kannaḍa and Tuḷu[1] on the other are striking enough and cover all the sections of linguistics. Of these differences many are phono-morphological, the most peculiar of which is the persistence of two sounds, the hard *r̤* and the 'peculiar vocalic' *l̤* in modern Tamil and their absence in the everyday vocabulary of the modern dialects of the others. Basing his views on the available literature and the spoken dialects, greatly handicapped as he was by the absence of published epigraphical material from which alone could be had the details of an authentic and continuous history of development of sounds and their alphabets in major Indian languages, Caldwell was constrained to merely observe, on the strength of analogy, that all the Dravidian languages contained these two sounds originally.[2] He

1. Malayāḷam is not taken into separate account in this paper as, generally speaking, what is said for Tamil holds good for this dialect also.

2. Vide *Comparative Grammar of the Dravidian Languages* (*CGDL*), II Edn. Part I, p. 37.

had to necessarily confine himself to a study of the changes that these two sounds underwent in the modern dialects of Telugu, Kannaḍa and Tuḷu.

However, innumerable inscriptions on stone and copper, discovered from various parts of the Dravidian half of the country during the past few decades and published in various journals by epigraphists of repute, now furnish a continuous history of the evolution of early Indian writing into the present-day Dravidian alphabets. A study of these inscriptions provides an interesting picture of the role played by the Dravidian sounds *r̤* and *l̤* in Tamil, Telugu and Kannaḍa. In the case of Tuḷu,[3] however, in the absence of the written material going back to any antiquity, it is not possible to adduce authority for the presence of these sounds at any stage of its history. In keeping with Caldwell's wish[4] that the Southern alphabets, ancient and modern, should be compared with one another and with the characters used in Northern and Central India, an attempt is made hereunder to make a comparative study of the historical development of *r̤* and *l̤* in Dravidian languages.[5]

Early Dravidian Inscriptions

It is well-known that for a few centuries following the period of the Aśōkan edicts, inscriptions in the south were engraved in the Prākṛt language with a script that was either very similar to or directly adopted from Aśōkan Brāhmī. With the revival of Hinduism under the aegis of the Gupta Emperors, Prākṛt gave

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3. Analogically speaking Tuḷu also had these sounds originally.

4. *Vide. CGDL.* Op. Cit. p. 10.

5. Separate treatments of these two sounds *r̤* and *l̤* in Tamil, Telugu and Kannaḍa have been made in recent years in the pages of many vernacular journals. The present paper is different in that it purports to make a comparative study exclusively on the basis of available epigraphical material.

way to Sanskrit throughout the country[6] but the script continued to be the same as that derived from Aśōkan Brāhmī though regional peculiarities in the formation of various letters were already on their way. In the south, however, both Prākṛt and Sanskrit had to combat the strong influence of the Dravidian tongues culminating in the disappearance of Prākṛt and in Sanskrit sharing the place of honour in royal courts and charters with the regional Dravidian languages Tamil, Telugu or Kannaḍa as the case was. The growing influence of the native languages of the Dravidians is attested to by the diction of the Brāhmī inscriptions[7] of the Tamil country and by the penetration of Dravidian names of places and persons into the body of Sanskrit epigraphs, numerous examples of which are noticed in the records of the early South Indian dynasties. (Compare the names *Ar̤utor̤e* in the Peddavegi plate[8] of Sālankāyana Nandivarman II, *Viḷavaṭṭi* in the grant[9] of Pallava Siṁhavarman, *Pāpār̤a* in the copper plate grant[10] of Gaṅga Avinīta, all of the fifth-sixth centuries and similar other Dravidian names occurring in the charters of the early Kadambas). We can also mention in this connection the Gurzala Brahmi inscription[11] of the third century in which the name of the Ikṣvāku ruler is spelt *Ruḷapurisadata*, indicating thereby the mounting influence of the Dravidian languages even as early as that period.

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6. In the South, inscriptions dated prior to the fourth century A. D. such as those of the Āndhras, are always in Prākṛt. The period of the Sanskrit charters must have commenced somewhere about the fourth–fifth centuries. (Vide. *Ep. Ind.* Vol. XV, pp. 247–48).
7. Photographs published in *Annual Report for South Indian Epigraphy*, 1912, 1915 and 1918.
8. *Journal of the Andhra Historical Research Society*, Vol. I, pp. 92 ff.
9. *Ep. Ind.* Vol. XXIV, plate opposite p. 302, line 13.
10. *Mysore Archaeological Report* (*MAR*) 1916, pp. 35 ff.
11. *Ep. Ind.* Vol. XXVI, p. 125, line 3.

The next stage is the appearance of inscriptions written entirely in any one of the Dravidian languages. The Tirunātharkuṉṟu inscription,[12] the Halmiḍi[13] stone inscription of the Kadamba king Kākustha, both belonging to the first half of the fifth century and the Kalamaḷḷa and Erraguḍipāḍu inscriptions[14] of the Telugu Chōḍa ruler Erikal Mutturāju of the first quarter of the sixth century are the earliest as yet known inscriptions written in Tamil, Kannaḍa and Telugu respectively though their contents betray a high degree of Sanskrit influence. Starting from then, Dravidian inscriptions became more and more copious as centuries rolled down till at last the occurrence of Sanskrit inscriptions becomes less frequent though not far between.[15]

Origin and Palaeography

(*a*) Tamil *ṟ* : The earliest known precursor to the modern Tamil *ṟ* (Chart I, BI) is found in the Tirunātharkuṉṟu inscription of the fifth century, referred to above. Attempts have been made,[16] however, to derive this fifth century script from a letter found in the Brāhmī inscriptions of the Tamil country which are claimed by some to be of the Aśōkan period and which at any rate are anterior to the third century A.D. (Chart I, A1). The discovery of inscriptions belonging to the period between the Brāhmī and the Tirunātharkuṉṟu inscriptions will be of great help in solving this problem. The letter *ṟ* as found in the Kūram plates[17] of Pallava Paramēśvaravarma I of the seventh century provides the

12. *Travancore Archaeological Series* (*TAS*), Vol. I, p. 231.
13. *MAR*. 1936 plate facing p. 72.
14. *Ep. Ind.* Vol. XXVII, pp. 225 ff. Plates.
15. We should notice in this context the fact that, while early copper plate grants which were mostly issued under the royal seal were in Sanskrit, stone inscriptions, in particular hero-stones, which purported to acquaint the commoners with the valourous deeds of the heroes concerned, were in the native tongues.
16. *South Indian Temple Inscriptions*, Vol. III, Part II, p. 1537.
17. *South Indian Inscriptions* (*SII*), Vol. II, plate facing pp. 342–334.

link between the fifth century and post-seventh century forms for Tamil ṟ. In the Lālguḍi inscription[18] of Pallava Nṛpatuṅga-varman belonging to the last years of the ninth century the letter (Chart. I, F1) is written with a slanting stroke at the left top thus lessening the difference between old and modern ṟ. The changes the letter undergoes from then on are not very significant and could be easily made out from Chart I, Column I.

(*b*) Tamil ḻ: The earliest known script for Tamil ḻ (Chart II, A1) occurs in the Brāhmī cave inscriptions of the Tamil country already referred to. This is followed in chronological sequence by the form found in the Gurzala Brāhmī inscription (Chart II, B1) of the third century. The next stage in the development of this letter is seen only in the Tirunātharkuṉṟu inscription and the Viḻavaṭṭi grant (Chart II, C1, D1), both of which have been already referred to. The letter thus found in these epigraphs continued in more or less the same form down to the modern times with very little changes. These changes could be studied from Chart II, Column I. Grantha ḻ as found in the Tiruchirāp-paḻḻi rock-cut temple inscriptions of[19] the seventh century belongs to the Telugu-Kannaḍa variety and is closely connected with the form of the letter occurring in Telugu-Kannaḍa charters of the same period.

(*c*) Vaṭṭeḻuttu ṟ and ḻ: As the very term *Vaṭṭeḻuttu* implies, letters in this script were written with cursive lines. The form of ṟ (Chart I, E2) as seen in Pāṇḍyan inscriptions of the eighth century are very similar to that letter as found in the Lālguḍi inscription referred to above. Generally speaking it may be said that the Tamilian parent-script for ṟ began to show separate Vaṭṭeḻuttu-tendencies during the eighth-ninth centuries (Chart I, F2). With the passing of time the two free ends tended to become more and more cursive until in about the eleventh century its usage in the Pāṇḍyan region itself fell into disuse. The palaeo-graphy of the letter ḻ in Vaṭṭeḻuttu is not different from that of its Tamil counterpart.

18. *SII.* Vol. IV, plate opposite p.173.
19. *Ibid.* plate in Vol. II.

(*d*) Telugu-Kannaḍa *r̤* : As the development of the alphabets of Telugu and Kannaḍa is fatefully intertwined it is proposed to study the origin of Telugu-Kannaḍa *r̤* and *l̤* each under one head. While Tamil suggestedly developed a form of *r̤* very early in its history, Telugu and Kannaḍa at least as per epigraphical evidence do not seem to have had a script for *r̤* much before the fifth century to which period belongs the Kannaḍa inscription from Halmiḍi. This epigraph which is the most archaic of Telugu and Kannaḍa inscriptions so far discovered makes use of both the letters *r̤* and *l̤* more than once. A point of interest here is the resemblance of the script for *r̤* as found in the Halmiḍi record to the sign for *upadhmānīya* as found in the early records of the Sālaṅkāyana, Vākāṭaka and Kadamba families of the fourth and fifth centuries. The similarity is so pronounced that it could not have been accidental. It must be borne in mind that the inscriptions of all the early dynasties of the south, with the exception of the Tamil country in this particular context, employed each a variety of what has come to be known as the Southern alphabet and that the palaeographical changes that characterised the development of these alphabets into regional scripts were more or less common to all these varieties. In view of various conclusions that have been arrived at on grounds of palaeography, we will not be suggesting the impossible when we say that the genesis of Telugu-Kannaḍa *r̤* should be traced back to the sign for *upadhmānīya*. When the scribes were faced with the problem of correctly putting down in writing certain Dravidian words containing the sound *r̤* they must have found it convenient to adopt the *upadhmānīya* sign for *r̤*. This suggestion of ours is supported by the fact that the signs for *upadhmānīya* and *r̤* underwent corresponding changes[20] for a few centuries until in the beginning of the tenth century representation of *upadhmānīya* fell out of popular use.

We can also adduce phonological instances in justification of this adoption. The best illustrations at hand are the names of

20. This can be easily verified from Chart I, Columns 3 and 4.

two villages occurring in the Shiggaon plates[21] of the Western Chāḷukya Vijayāditya dated in the early years of the eighth century. These have been read as *kah̤pūr* and *uh̤peṭṭi* on the assumption that the sign over *pa* stands for *upadhmānīya*. It is, however, unlikely that the name of a village situated in the Dravidian region will contain the sound of *upadhmānīya* in its pronunciation and, therefore, we suggest that the sign above *pa* should be treated as the superscript *r̤*.[22] The names, then, will be *Kar̤pūr* and *Ur̤peṭṭi*. Our purpose here is to point out the appa-ent nearness of the sounds *h̤pū*, *h̤pe* to *r̤pū*, *r̤pe* the only difference being that while pronouncing the former sound if the tip of the tongue strikes against the front palate the sound is changed into *r̤p*. This phonetic nearness appears to have induced the scribe to copy the sign of the *upadhmānīya* for the rough *r̤* of Telugu-Kannaḍa.

As shown in Chart I, B3, the earliest form (of the fifth century) for Telugu-Kannaḍa *r̤* has a more or less circular outer frame which is divided into four equal quadrants by two diameters intersecting at right angles. This form continued to be used during the sixth and seventh centuries also,[23] but, in some cases the outer frame displayed an inward deepening along the two ends of the vertical line (Chart I, C3). In the Tippalūr inscription[24] of Vikramaditya II dated in the first half of the eighth century we find that the Telugu-Kannaḍa form for *r̤* (Chart I, E3) had already taken its later form with the separation of the deepening ends at the top, and only the deepening at the bottom representing what was hitherto the vertical stroke. From then on the shape of the letter continued to be the same, the little changes that were

21. *Ep. Ind.* Vol XXXII, plate opposite p. 321, line 53.

22. The letter *r̤* is used as a superscript in numerous instances from the seventh century onwards.

23. *Cf.* The form for *r̤* in the Turimella inscription of Vikramāditya I dated in 656–657 A.D. (*Ep. Ind.* Vol. XXIX, pp. 160 ff. and plates).

24. *Ep. Ind.* Vol. XXX, pp. 12 ff. and plates.

seen in the inscriptions being insignificant. It must, however, be noted that earlier forms of *ṟ* continued to be used right upto the beginning of the ninth century A.D. We may also notice the form of *ṟ* in a copper plate from Kumṭa of the sixteenth century in which the letter is formed by an inward bend at the bottom of the letter for Kannaḍa *ā* (Chart I, K3). In many old Telugu and Kannaḍa records, the form of the letter *ṟ* was used with some changes in its position as a subscript. Thus in the Gōraṇṭla grant of Attivarman, referred to below and in some of the early Chāḷukyan records the subscript *ṟ*, even when the superscript *n* is changed into an *anusvāra*, has the same circular outer frame with the usual horizontal diametrical line the vertical one being, however, replaced by a downward perpendicular line starting from the central point. In order to make this point clear, a separate column has been provided for Telugu-Kannaḍa subscript *ṟ* (Chart I, Column 3).

Many records of the early modern period which are engraved in *nāgarī* characters make use of the developed forms of Telugu-Kannaḍa *ṟ* wherever necessary. In certain late medieval records, however, when the script used is *nāgarī*, Dravidian *ṟ* is represented by the doubling of ordinary *r* ; e.g., *Rraṭṭa* for *Ṟaṭṭa*, a family name (*Ep. Ind.* Vol. VII, p. 217); *Kumbārra-gerre* for *Kumbāṟā-geṟe* (*Ep. Ind.* Vol. VII p. 219).

(*f*) Telugu-Kannaḍa *ḻ*: Though the Gurzala Brāhmī inscription hails from Telugu-Kannaḍa area the prominent upper and lower limbs of *ḻ* in that epigraph throw serious doubts about its having been the earlier source for Telugu-Kannaḍa *ḻ* of the fifth century. The lower limb in particular is a distinctive feature for Tamil *ḻ*. The Halmiḍi inscription uses two forms (Chart II, C2) for *ḻ*, the first of which is obviously a simplification of the sign for *ṟ* achieved through the removal of the horizontal stroke, and the second a modification of the first. The Telugu-Kannaḍa letter *ḻ* underwent changes in strict correspondence to the letter *ṟ*. That the form of *ḻ* is merely a simplification of that for *ṟ* is proved by the fact that from about the ninth century, when the deepening at the top becomes separated, the two letters came

CHART I.

	1	2	3	4
Period	Tamil ṟ	Vaṭṭeluttu ṟ	Telugu-Kannaḍa ṟ	Upadhmānīya
A. FOURTH CENTURY AND BEFORE				
B. FIFTH CENTURY				
C. SIXTH CENTURY				
D. SEVENTH CENTURY				
E. EIGHTH CENTURY				
F. NINTH CENTURY				
G. TENTH CENTURY				
H. ELEVENTH CENTURY				
I. TWELFTH CENTURY				
J. THIRTEENTH CENTURY				
[K]. MODERN PERIOD (Subsequent to J)				

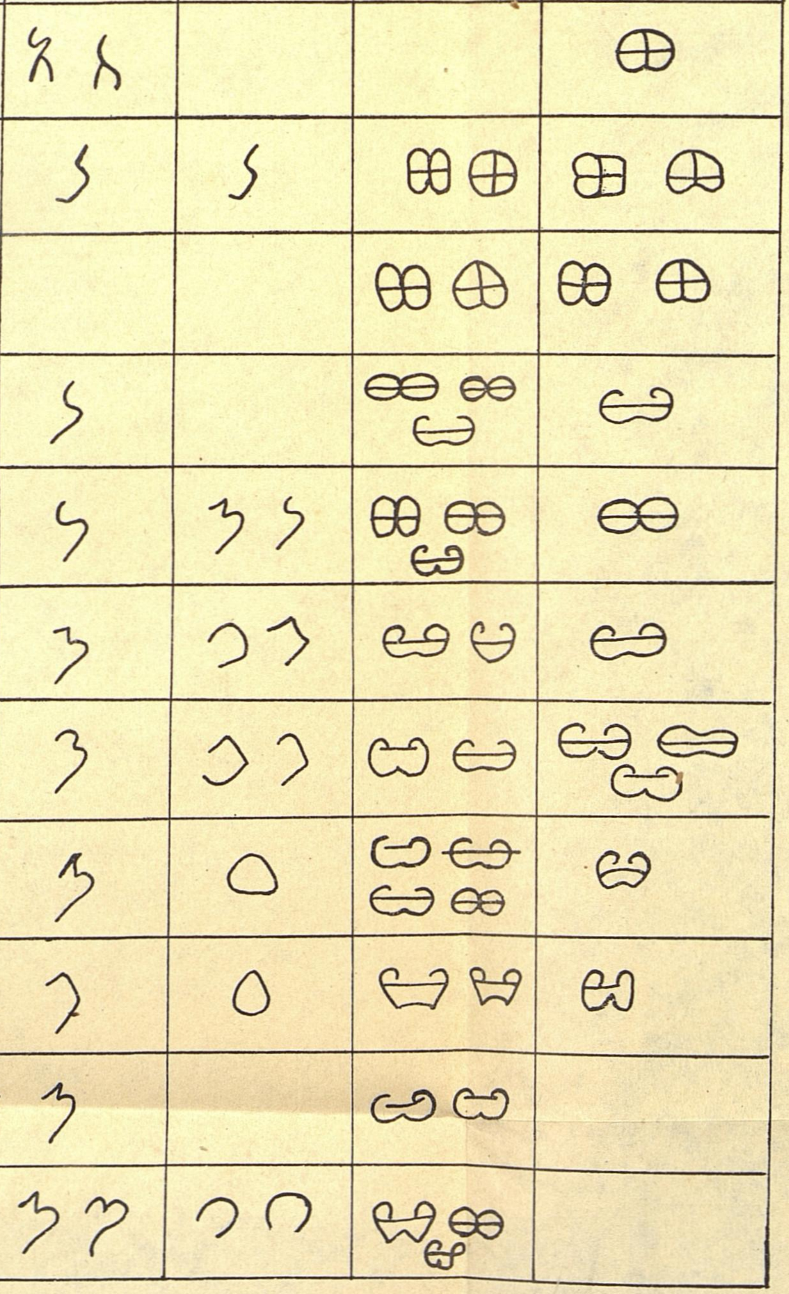
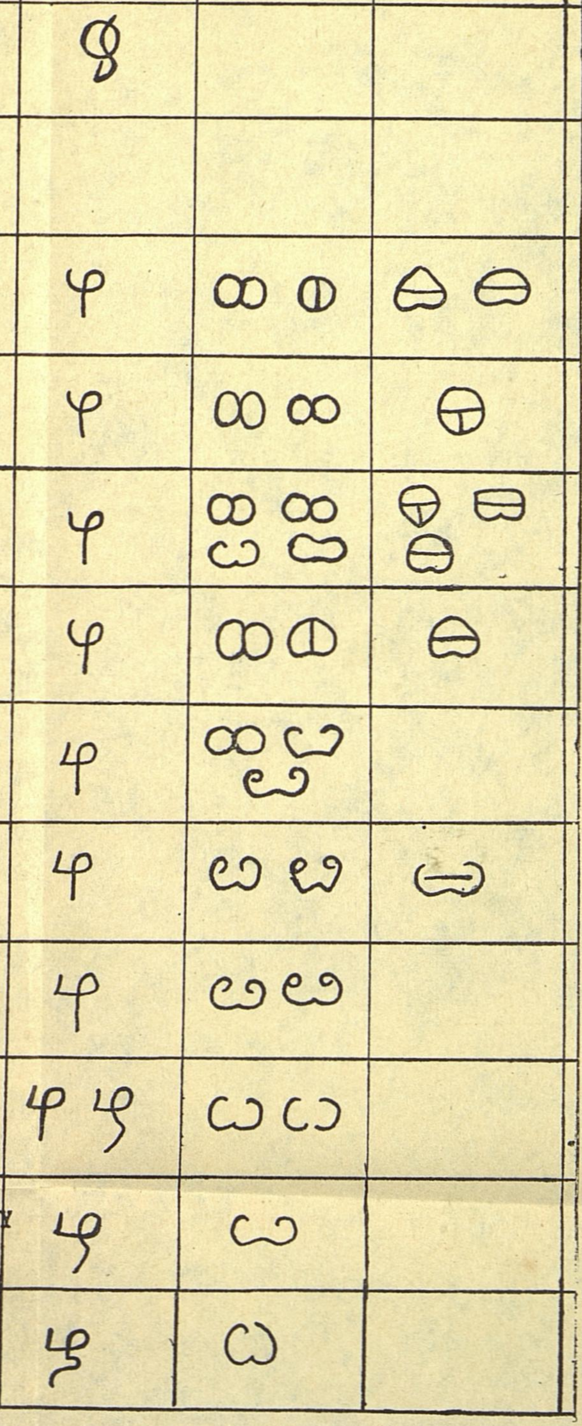


CHART II.

	1	2	3
Period	Tamil and Vaṭṭeluttu ḻ	Telugu-Kannaḍa ḷ	Subscript ṟ
A. THIRD CENTURY			
B. FOURTH CENTURY			
C. FIFTH CENTURY			
D. SIXTH CENTURY			
E. SEVENTH CENTURY			
F. EIGHTH CENTURY			
G. NINTH CENTURY			
H. TENTH CENTURY			
I. ELEVENTH CENTURY			
J. TWELFTH CENTURY			
K. THIRTEENTH CENTURY			
L. MODERN PERIOD (Subsequent to K)			



to be written in exactly the same way, the only essential difference between them being the horizontal stroke in r̤ (*cf.* Chart I, Column 3 and Chart II, Column 2).

Orthography

We have seen that the Gurzala Brāhmī inscription of the third century, referred to above, employs the letter ḻ for spelling the name of the Ikṣvāku king *Ruḻapurisadāta*. The Gōraṇṭla grant[24] of Attivarman of about the fourth-fifth century has the name of a village as *Tānr̤ikonr̤a*. The Tirunātharkunr̤ui inscription employs r̤ and ḻ for spelling *nōr̤r̤ā* ('he who observes') and the numeral *ēḻū* (seven). The Halmiḍi Kannaḍa inscription contains the following words with r̤ and ḻ:—*er̤idu* ('pierce') *Kur̤umbiḍi*, a village name; (*pogaḻ*, Tamil: *pugaḻ*, Tuḷu: *pugaḷ*, Telugu: *pogaḍu*) meaning 'praise'; *bāḷ-gaḻchu* (where *kaḻchu* = Tamil *kaḻuvu* 'wash') *Saḻbanga*, a village name; *gaḻde* 'field' (modern Kannaḍa *gadde*). The Kalamalla and Er̤r̤aguḍipāḍu inscriptions employ these two letters in the following instances: *Chirumbūru* and *Aḻikaḷā-ūru*, village names; *Dhanañjayur̤u*, where r̤u is an honorific; *mar̤untur̤lu* (*mattaru* of old Kannaḍa inscriptions) standing for a standard land-measure. We may add to this list place-names such as *mar̤r̤ūru*, *Ipar̤uṁkal*,[25] *Nandakur̤r̤a*[26], and a host of others appearing in seventh–eigth century epigraphs. We thus find that in the Tamil, Telugu and Kannaḍa inscriptions of the fifth, sixth and seventh centuries r̤ and ḻ were used in order to correctly write down Dravidian words, the only exception being the honorific suffix at the end of a purely Sanskrit word. A study of early Telugu inscriptions shows that the most pronounced differences

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25. *Indian Antiquary*. Vol. IX, plate opposite p. 102. The name has been wrongly read by the editor as *Tānthikontha*. Our correction is well supported by the fact that in a later inscription (*Ep. Ind.* Vol. XXIII, p. 161) the place is called Tāṇḍikoṇḍa° the change of r̤ to ḍ occurring in the natural course of linguistic change.

26. *Ep. Ind.* Vol. XXXII, pp. 175 ff. and plates.

between modern Telugu and other Dravidian dialects attributable to the indiscriminate Teluguisation of Sanskrit words and compounds had set in at the very dawn of Telugu epigraphical history. As a result we come across a large number of ill-formed compounds like *Samyuktunṟugu* (*Samyuktunṟu=agu*) and *madamuditunṟ=uttamōttamunṟ–ayinavānṟu* as found in the Indukūru inscriptions[27] of Chōḷa Mahārāja and the Tippalūru inscription[28] of Puṇyakumāra both of the seventh century. Āchandradiṟṟu (the correct form of which will be *āchandrādityuṟlu*) occurs in an inscription[29] dating back to the eighth century from Nallacheruvupalli.

A detailed orthographical study of *ṟ* and *ḻ* in old Dravidian inscriptions has its own rewards to the linguist. It reveals beyond doubt that these two sounds were at least as much commonly used in all the Dravidian dialects as any that has come down to the modern times. Apart from their intervocalic usage, they were also used in the formation of conjunct consonants. Whereas, *ṟ* was, however, used profusely both as a superscript and subscript, the letter *ḻ* was as a rule used only as a superscript, with a very limited number of exceptions, two important examples of which are the district names *Pḻakki* (*Prakki* of later inscriptions) occurring in a few records[30] of the seventh century and *Pḻōḷ-nāḍu* (*Prōl* – or *Prōlu-nāḍu* of later times) occurring in the Ipuru inscription[31] of the eighth century.

Convention denies these two letters the initial position. A few of the exceptions to this convention, noticed here and there in inscriptions are listed below:

Ḻachchu, *ḻachchine* (same as *aḻisu*, *aḻisina* from *aḻi*, 'to destroy') in early Telugu-Choḍa inscriptions of the seventh and eighth centuries.

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27. *Ep.Ind.* Vol. XXXII, pp. 89 ff. and plates; Vol. XXIX, pp. 89 ff. and plates.
28. *Ibid.* Vol. XXVII, p. 230.
29. *Ibid.* p. 233.
30. *Ibid.* p. 239.
31. *Ibid.* Vol. IX, p. 317 ff; Vol. XII, pp. 133 ff; Vol. XXXI, pp. 129 ff.

Ḻagubamru, a place-name in a Pallava charter of the seventh century (*Ep. Ind.* Vol. XXIV, p. 142, line 19).

Ḻendulūra, a village, in a Viṣṇukuṇḍin record of the eighth century (*Ep. Ind.* Vol. IV, p. 195, line 1).

Ḻoṅkuḷa, a family name, in early Telugu records (*SII.* Vol. X Nos. 623 and 640).

Ṟolleyanūru, a village name (*SII.* Vol. IX, Part I, No. 29) *ṟoṭṭa* probably 'disrespect' (*Ibid.* No. 57, 58, etc.) and *Ṟoṭṭayya*, the name of a person (*Ibid.* No. 66) in tenth century inscriptions.

Ḻoṅka, 'a dell' in an Eastern Gaṅga charter of the eleventh century (*Ep. Ind.* Vol. III, p. 223 line 20).

In many instances we find that *ṟ* has been engraved instead of *ḻ* and *vice versa*, possibly owing to the ignorance of the composers or of the engravers. A few early Telugu–Chōḍa inscriptions thus have *vṟachchina* for *aḻisina* or *ḻachchina* (*aḻi* 'to destroy'). In medieval epigraphs *gadde* ('a field') of later times occurs variously as *gaṟde*, *gaḻde* and *garde*. Some medieval Kannaḍa inscriptions have *iṟḻdu* for *iṟdu* though the grammarian Kēśirāja expressly prohibits the substitution of *ḻt* and *ṟt*.[32] The correct form for *negaṟdiḻda* found in an inscription[33] of the eleventh century from Bellary is *negaḻdirda* (Tamil: *nigaḻndiruda*). In medieval Telugu records we find the word *kaṟuta*, (as in *Gaṅga-kaṟuta*, 'on the banks of the Ganges') the correct spelling for which is *karta* (*kara*, Tamil: *karai*, Kannaḍa: *kare*).

An interesting feature in Dravidian epigraphy is the representation of certain purely Sanskrit sounds either by *ṟ* or by *ḻ*. These two letters were chosen for that purpose obviously with a view to retain the phonetic value of the replaced Sanskrit sounds. *Ruḻapurisadāta* for *Rudrapuruṣadatta*, reference to which has already been made, is the oldest available instance of this. The Chura grant of Pallava Vijaya Viṣṇugōpavarman has *Karmma-rāṭṟa* for *Karmma-rāṣṭra*.[34] Tamil *aniḻam* and *pakkiḻam* for Sanskrit *anusham*

32. *Ep.Ind.* Vol. XVIII, pp. 58–60.
33. *Śabdamaṇidarpaṇa*, *sūtra* 24.
34. *SII.* Vol. IX, Part I, No. 158.

and *pakṣa* respectively are only two of the many later examples at hand. In some Tamil and Kannaḍa records[35] the cerebral *ṭ* in *bhaṭāra* is replaced by *ḻ* and the word written as *bhaḻāṟa*. *Rakṣikka* is written in a Tamil record[36] in Vaṭṭeḻuttu characters of the tenth century as *iraḷchchikka*. The name *Pṛthvīpati* is dravidianised into *Piḻduvīpati* in a ninth century Gaṅga record.[37] In a sixteenth century record[38] from Pālaiyūr *sākṣi* is written as *tāḻkki*.

General History

We have seen that the history of written *ṟ* and *ḻ* as far as it could be established on the basis of available epigraphs starting from about the third century of our era (fifth century in the case of Tamil *ṟ* and Telugu-Kannaḍa *ṟ* and *ḻ*) and in the case of Telugu and Kannaḍa ended, in the early modern period.

There were certain purely Dravidian word-forms which were current in the every days of speech of the Telugu-Kannaḍa populace, with the letters *ṟ* and *ḻ* in their spelling. There is no doubt that these words in a general sense were responsible for the retention of these two sounds for a long time in Telugu and Kannaḍa even in the face of active Sanskritisation that was initiated by orthodox royal houses. A few such words which made their appearance in inscriptions early and continued down to late periods are listed below :

Kēṟi (modern Tamil : *chēri*); *negaḻda* (Tamil . *nigaḻnda*), *pēṟu* or *hēṟu* ('a heap' or 'a load') etc. in Kannaḍa inscriptions. Kannaḍa *eṟedu* (as in *nīṟ-eṟedu koṭṭār*) is one such word, the Tamil equivalent for which is *iṟaitu* though Tamil epigraphs use in the same context, the synonym *vārttu*.

Paṟṟu, *paṟti* and *paṟiti* signifying a locality in Telugu inscriptions.

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35. *Ep. Ind.* Vol. XXIV, p. 142, lines 16-17.
36. *Ibid.* Vol. XXXIII, Part III, plate opposite p. 133, line 13.
37. *TAS.* Vol. III, No. 35.
38. *Annual Report on Indian Epigraphy* 1913, pp. 92–93.
39. *Ibid.* No. 38.

Ker̤e (Kannaḍa), *Cher̤uvu* (Telugu) 'a tank' *nūr̤u* ('hundred'), *mūr̤u* ('three'), *ēl̤u* ('seven') and the dynastic name *Nol̤amba* in Telugu and Kannaḍa inscriptions.

Even the frequency in the usage of such common words, however, could not arrest the rapid softening of Dravidian sounds in Telugu and Kannaḍa. Thus in the modern dialects of Telugu and Kannaḍa *r̤* and *l̤* were softened into *ṛ* and *ḷ*, though even in modern Telugu *r̤* is employed in certain rare instances. The large number of words with *r̤* and *l̤* given in Kannaḍa dictionaries are as a rule written in ordinary compositions of the present day only with *ṛ* and *ḷ*.

On the basis of certain observations made in connection with the preparation of this paper, certain conclusions permitting generalisation, can be arrived at :

(1) Forms like Telugu *paṇḍr̤eṇḍu* (Tamil : *pan̤n̤iraṇḍu*, Kannaḍa : *panneraḍu* ' twelve '), *maganr̤u* (Tamil : *magandir*, Kannaḍa : *magandiru* ' sons '), *ūr̤la* (Tamil : *ūrin*, Kannaḍa *ūrina*, 'of the town') and Kannaḍa *ir̤du* (Tamil : *irundu*) show that when the vowel preceding *r* was dropped in Telugu and Kannaḍa, the *r* itself was roughened to *r̤* more so in the case of Telugu.

(2) Following the above feature there was a manifest tendency in Kannaḍa to change *r̤* to *l̤* when immediately followed by a consonant *e.g. per̤dore* > *pel̤dor̤e* ; *per̤chuge* > *pel̤chuge* ; *per̤-javasa* > *pel̤-javasa* ; *ir̤chāsira* > *il̤chāsira* ; *īr̤nūru* > *il̤nūru* ; *ir̤du* > *il̤du* ; *mar̤taru* > *mal̤taru*. However, words such as *gar̤de* for the older form *gal̤de*, *kar̤te* for the older form *kal̤te* (Tamil *kal̤udei*, 'donkey') and *er̤du* for *el̤du* (Tamil *el̤undu*, ' having risen ') show that the reverse process of the older *l̤* being replaced by *r̤* was also well on its way.

(3) This tendency was not restricted to cases where the letter immediately preceding the consonant was *r̤*. Instances like *nāl̤ke* < *nāḍke* < *nāḍige*, *nāl̤-gāmuṇdu* < *nāḍ-gamuṇḍu* < *nāḍagā-muṇḍu*, *āl̤dam* < *āḷidam* and *āl̤ke* < *āḷke* show that *ḍ* and *ḷ* also when immediately followed by a consonant were changed to *l̤*.

This leads us to believe that the substitution of *l̤* for *ḷ* in these cases was not a mistake but was executed in order to ease the pronunciation. Obviously *l̤* was considered to be a softer and easier initial sound of a conjunct cluster than some other dravidian sounds like *r̤*, *ḍ* and *ḷ*.

(4) *L̤achchu*, *l̤achchina* for *al̤isu* and *al̤isina* in early Telugu inscriptions show that formation of words through the euphonic displacement of the vowel had started at a very early period. Unlike in the case of *dīniki* (Tamil: *idanukku*, Kannaḍa: *idarkke* or *idakke*) in *l̤achchu* etc. the substitute vowel, however, is not lengthened.

(5) The Dravidian sounds *r̤* and *l̤*, at a time when they were popularly employed in all the sister dialects, were considered to be phonetically allied to certain purely Sanskrit conjuct clusters as proved by *rāṭr̤a* for *rāṣṭra*, *anil̤am* and *iraḷchchikka* for *anusha* and *rakṣikka* and *el̤de* for *hṛidaya*.

(6) Finally, we can draw a clear picture of the various changes which eventually lead to the disappearance of *r̤* and *l̤* from modern Telugu and Kannaḍa. We give below a list of such changes:

Telugu

r̤ > *r*: *Cher̤uvu*, or *Cher̤vu*, 'tank', > *Cheruvu*: *par̤uti* or *par̤ti* > *paruti* or *parti*; *mar̤unturu* > *marunturu*.

r̤ > *ḍ*: *maganr̤u* > *magaṇḍu*; *anvānr̤u* > *anvāṇḍu*.

Kannaḍa

r̤ > *r*: *Sār̤u* > *sāru*; *ter̤e* > *tere*; *por̤e* > *hore*.

Dravidian *l̤*

Telugu:

l̤ > *ḍ*: *negal̤* > *negaḍu*, *pogal̤* > *pogaḍu*; *ī-pol̤du* > *ippuḍu*.

l̤ > *r*: *pul̤u* > *purugu*.

l̤ > *d*: *pol̤du* > *poddu*. Here *l̤* possibly through some intermediary changes for which we have no epigraphical proofs gets itself assimilated to the succeeding consonant *d*.

Kannaḍa:

l̤ > *ḷ*: *negal̤* > *negaḷ*; *pogal̤* > *pogaḷ*.

l̤ > *d*: *gal̤de* > *gar̤de* > *garde* > *gadde*. Here again *r* < *r̤* < *l̤* gets assimilated to the succeeding consonant *d*.

l̤ > *t*: *pol̤tu* > *por̤tu* > *pottu* (*hottu*). Here *r* < *r̤* < *l̤* is assimilated to the succeeding consonant *t*.

We furnish hereunder a list[40] of words common for all the three dialects, chosen from epigraphical records. Wherever it has not been possible to find the exact archaic equivalents in inscriptions, the modern equivalents are given. This helps one to judge the degree of oneness that characterised these sister dialects in early times.

Tamil	*Telugu*	*Kannaḍa*	*meaning*
al̤ittavan̤ *al̤ittōn̤*	*al̤iśinavāṇḍu* *l̤achchinavāṇḍu*	*al̤idōn* *al̤tavōn*	destroyer
mūn̤r̤u	*mūnr̤u*	*mūr̤u*	three
kal̤uvu	...	*kal̤chu*	wash
ēl̤u	*ēl̤u*	*ēl̤u*	seven
śūr̤ai	*chūr̤a*	*sūr̤e*	loot
śir̤ai, 'embankment'	*cher̤uvu* *cher̤vu*	*ker̤e*	tank

40. The list is not exhaustive. No attempt has been made to arrange this list on the basis of the chronological occurrence of the words. Such an arrangement will have to be arbitrary in the main for many words in the above list occur, as they do, from early times down through centuries. As there is a dearth of published Telugu inscriptions, a few of the equivalents have been selected from *Śabda Ratnākaram* compiled by B. Sitaramacharyulu.

Tamil	*Telugu*	*Kannaḍa*	*Meaning*
śiṟiya	*chiṟu*	*kiṟiya*	small, young
poḻil 'grove'	*puḻōlu* *puṟōlu* *pṟōlu*	*voḷalu* *poḷal*	town, city
(*nāḍ*) *āḷ* (*vān*)	*ēḻu*	*āḷ* (*ke*)	rule
pugaḻ	*pogaḍu*	*pogaḻ*	praise
nigaḻ	*negaḍu*	*negaḻ*	happen
niṟai	*neṟa*	*neṟe*	full
poḻudu	*poddu*	*poḻtu*	time
taruvāy	*taṟuvāta*	*taṟuvāya*	later
āṟu	*ēṟu*	—	river
pēṟu 'a thing obtained'	*peṟika*	*pēṟu* *hēṟu*	load
pāṟu	*pāṟu*	*pāṟu*	to run
māṟu	*māṟu*	*māṟu*	enmity
magiḻ	—	*maguḻ*	rejoice
śiṟṟiṟai	*chiṟu-deṟa*	*kiṟu-deṟe*	minor taxes
śiṟai	*cheṟa*	*seṟe*	prison
meṟugu	*meṟugu*	*meṟugu*	lustre
śaṟṟu	*chāṭu*	*sāṟu*	make public
aṟivu	*eṟuka* *eṟike*	*aṟivu*	knowledge
iṟaṅgu	*eṟagu*	*eṟagu*	incline, with-stand
tiṟai	*teṟa*	*teṟe*	tax
tōṟṟu	*tōchu*	*tōṟu*	to display, exhibit
kīḻ *kīḻe*	*kinda* *krinda*	*kīḻ* *keḻage*	below
maṟu	*maṟu* *maṟi*	*maṟu*	again, in return

Tamil	*Telugu*	*Kannada*	*Meaning*
tur̤u	*tor̤r̤u*	*tur̤u*	cattle
kal̤ani	...	*kal̤ani*	rice field
eḷundu	...	*el̤du*	having risen
pul̤u	*purugu*	*pul̤u*	worm
ur̤am	*ur̤iya*, strong	*ur̤a*	strength
il̤ivu	...	*il̤ivu*	mean, fall
kor̤u	*gor̤u*	*kur̤i*	sheep
kēl̤	...	*kēl̤*	ask
Ir̤aivan	...	*Er̤eya*	God, king, chief
kal̤udei	*gāḍde*	*kal̤te*	donkey
kor̤r̤u	*kr̤oche* / *kor̤oche*	*kor̤e*	engrave
ir̤ai	...	*er̤e*	sprinkle, pour
kūɭ	...	*kūl̤*	food
er̤i, throw	*ir̤iyu*, crush	*ir̤i*	pierce
erudu	*eddu*	*er̤tu* / *el̤tu*	bullock
vil̤undu / *vil̤ndu*	...	*vīl̤du* / *bīl̤du*	having fallen down
payar̤u		*pesar̤u*	green-gram
pir̤ar	*per̤a*, another	*per̤ar*	others
mīr̤u	*mīr̤u*	*mīr̤u*	exceed
por̤ai	...	*por̤e* / *vor̤e* / *hor̤e*	load, burden

The author is obliged to the Government Epigraphist for India, Ootacamund, for permitting him to make use of the published texts of inscriptions.

A BIBLIOGRAPHY ON INDIAN MEGALITHS*

K. S. RAMACHANDRAN

S

SALI, S. A. IA : 1960–61, pp. 26.

Exploration in District Dhulia.

In a pit burial at Ranjala, besides pieces of human bones distinct megalithic pottery *viz.* conical bowl, stand, dish etc. in Black-and-red ware, and all black ware were found. Although no megaliths were noticed the occurrence of undoubtedly megalithic pottery as far north as the Tapti valley is significant.

SANDFORD, J. R. JAS : Vol. III, pp. 461–471, 1901.

Notes on the recent opening of some prehistoric graves in the Coimbatore District, Madras Presidency.

The author gives an account of his excavations of a few circles enclosing urns and cist burials in three places in the Coimbatore District. The contents were the usual megalithic grave goods *viz.* pots, bones and iron implements. At Mangalam he found painted pottery.

SANKALIA, H.D. BDRI : Vol. I, pp. 178–184, 1939–40.

Megalithic monuments near Poona.

Dolmens, menhirs and stone circles were found at Bhavasari, about eight and a half miles north of Poona, on the Poona-Nasik road. Among the dolmens, the author has found a modern erection utilizing materials of an ancient monument. Interesting is the construction of another modern 'dolmen shrine' for an aged dead couple whose images have been installed in it. Local enquiries revealed that the purpose of the dolmen was to give some resting place for the spirits of the dead couple. Another feature is the use of a dolmen as a shrine for 'Chadoba', a local village deity. He also reports a polygonal stone enclosure. [180]

* Continued from Vol. LII, Page 188.

SARAN, S. IA : 1955–56, pp. 27.

Exploration in Tamilnad.

Discovery of Urn fields without any megalithic appendage at:

Nanjalur, Kattumannargudi	Chidambaram Taluk, South Arcot District.
Kumāramaṅgalam	Vridhachalam Taluk, South Arcot District.
Therazhundur	Māyāvaram Taluk, Tanjore District.
Kondahäi, Pitiachcheri	Nanilam Taluk, Tanjore District.
Perumkadambalur	Nagapattinam Taluk, Tanjore District.

The last, is seemingly associated with habitation. At Palayagandharva Kottai megalithic stone circles were observed.

SARKAR H. et. el. IA : 1960–61. p. 1.

Exploration in District Guntur.

Discovery of megaliths at Lam, Motadaka, Le Malle and Yedlapadu.

The bounding circle stones were of untrimmed granite boulders.

SARKAR, S. S. BDA.* Vol. IX 1960, pp. 5–26.

Human Skeletal Remains from Brahmagiri.

The author upholds Dr. Wheeler's observation that the pit circles were macerating pits refuting Mr. Banerjee's disagreement with Wheeler. These pits were common macerating pits and their use was temporary being analogous with the modern burning ghats which serve a large population. No selection of bones was involved. The pit circles were, perhaps, always kept open. The fact that the gold beads were not stolen was perhaps due to the universal fear of the dead and absence of the motive for stealing.

A detailed examination of the crania and long bones found in megalith VII support this theory. The mass of skull No. 1, on

* Bulletin of the Department of Anthropology.

cleaning comprised fragments of two crania : one of which was of an adult with thick spongy light bones and the other of a child or young adult with some unossified portions. The comparative loss of spongy portions in the adult bones with that found in the child or young adult could indicate the relative time of exposure.

While the long bones might belong to the skull No. 2, at Brahmagiri Megalith VII those of the other two crania were difficult to find.

Some animal bones were also found. Hence this pit was used at least thrice.

The ethnic affinities observed are rather tentative. Four skulls in Brahmagiri Megalith I appear to be meso and brachy in cranial index and Hyperchamaerrhine in nasal index. These skulls agree with one another in a large number of morphological details pointing to a familial relationship. Superimposition of median sagittal craniograms also point to this conclusion.

From the sparsely available (only two) long bones it could be observed that these were above and below median in stature. The robustness of the skeletal parts, the prominent molars of the highly worn out teeth indicate a very strong physical type.

The characters of the above four skulls do not agree with the autochthonous Australoid type of this country nor with the Indo-Āryans and therefore appears to be of foreign origin.

Skulls E and D differ considerably from the above morphologically and in indexes and would, perhaps, represent the local autochthonous Australoid element of this country.

The presence of skulls with divergent ethnic characters would indicate hybridization.

Megalith IV contained remains of two adults, of whom one was of slender build, besides those of a child. Megalith V gave the same evidence. Megalith VIII also contained two —of which one was slender. These point to the conclusion that each megalith was a family vault. Sialk brachycephals may be responsible for the Brahmagiri brachycephals. The mesocephals of Brahmagiri are probably close congeners of the 77–79 index people in Central and Western India.

The child skull of the stone axe culture is Australoid in form.

Concluding the author says " the crania from megaliths reveal an autochthonous Australoid type and a more or less medium statured mesocephalic medium vaulted flat nosed type with robust constitution and powerful upper and lower jaws probably of the Scytho-Iranian stocks."

SAXTON, G. H. PASB: pp. 52–54, 1870.

A set of iron implements etc. found in the Estate of Major Sweet.

Colonel Saxton in sending a set of iron implements, pottery etc. from a cromlech in a private estate in Nilgiri gives a scanty account of the contents and traditions regarding cromlechs. The pottery sent by him are similar to those cromlechs from Coorg described by Dr. T. Oldham.

SEN GUPTA, K. K. JASB: Vol. XII, pp. cxxiv, 1916.

On the chronological sequence of some megalithic monuments.

Modifying the chronological table of Logan the author gives a revised sequence.

(1) Dolmens, Menhirs, Cromlechs etc. } Probably
(2) Excavated caves } Synchronous

(3) (*a*) Caves with massive urns, umbrella stones and massive sepulchral urns without caves

(*b*) Hat stones

(4) Modern sepulchral urns of a small size.

Chronological sequence through evolution of megalithic monuments in different countries would be doubtful. So also architecture and contents would not indicate any contemporaneity. [185]

SESHADRI, M. IA: 1955–56, p. 70.

Megaliths in Mysore.

Discovery of megaliths at Naramantale, Arkalavadi in Chamarajanagar Taluk, Chinnasandra, Konganahalli in Chintamani Taluk, Jadigenahalli (Hosakote Taluk), and Kongarajapalli (Kolar Taluk).

SESHADRI, M. IA: 1956–57, pp. 34–35.

Excavation at Jadigenahalli, District Bangalore.

Megalithic stone circles, their diameter varying from six feet to twenty feet were excavated. The largest one was a double circle. These enclosed pit burials, going to a depth of twelve to thirteen feet. In two megaliths there were sub-pits, *i.e.* the lower parts divided into two pits and one of them interred a sarcophagus whose body was moulded by hand and with wheel made legs and domical lids. None of them contained skeletal remains. Pottery and iron objects *viz.* sickles, dagger and an object resembling frying pan were found. Pottery was the usual megalithic ware.

SESHADRI, M. IA: 1958–59, p. 33 and IA: 1959–60, p. 38.

Excavation at T. Narsipur.

The excavator says that Period II at T. Narsipur represented a full-fledged megalithic culture with typical Black-and-red ware, black polished and red ware. The megalithic pottery was noteworthy for its high polish, variety of shapes and graffitti.

SESHADRI, M. The Stone using cultures of Prehistoric and Protohistoric Mysore. pp. 59–72.

The Megalithic problem in Mysore.

The subject is dealt with extensively in many aspects *viz.* its relation to raw materials, geographical location, architecture, grave goods and finally their age.

The author is of the opinion that the construction of megaliths entombing a rich variety of articles was exclusively confined to the aristocratic stratum of society. Erection of slab-cists in a swastika pattern is a constructional necessity.

Among the grave goods found interesting is the iron celt from, Huttanhalli resembling the copper celt of Gungeria copper hoard.

Beads found were of carnelian, magnesite, steatite and serpentine. Substitution of more easily produced articles was going on in the megalithic period. Stone was gradually being replaced. The author mentions that Mr. Rea found a polished stone celt in a stone circle at Perumbair and Mr. Numa Lafitte discovered stone axes in urn fields near Pondicherry. He feels that Chandravalli would, perhaps, be a further step in the southern expansion of the megalithic folk.

Finally, discussing their age, the author discounts the common origin theory between European and Indian megaliths. Recounting evidences of coins, pottery etc. the author dates the megalithic period from sixth century B.C. to first century A.D.

A district-wise list of sites in Mysore is also given.

SEWELL, R. JRAS : pp. 165–170, 1902.

Prehistoric burial site in Southern India.

A synopsis of the prehistoric sites of South India is given. Urn burials continued in the times of the Cholas as well. A few problems as to the burial customs and manners, arts and crafts of ancient people are raised to be solved by the archaeologist. [190]

SEWELL, R.

List of Antiquarian Remains in the Presidency of Madras.

Among other things the author mentions the places where megalithic burials are found. The author himself says that he has compiled them form information supplied and that they need verification.

SHARMA, Y.D. PISCA : p. 142, 1947.

Age of rock-cut caves in Cochin.

Attempt is made to date the caves on the basis of pottery and architectural technique. The caves are neither Vedic nor Buddhistic in origin. They form part of megalithic culture.

SHARMA, Y. D. AI : No. 12, pp. 93–115, 1956.

Rock-cut caves in Cochin.

The author gives the method of construction of the caves and a detailed description of those found at Chovvannur

Kandanisseri, Kakkad, Porkalam, Eyyal and Kattakampal. The caves are classified into (*i*) caves with central pillar (*ii*) caves without pillar, (*iii*) caves with top opening and (*iv*) multi-chambered caves. The Vedic and the Buddhistic origin of these caves are discounted in favour of megalithic origin. Typological evolution is given as follows:

(1) Benched porthole cist,

(2) Caves with a central pillar,

(3) Caves without central pillar,

(4) Cave with a top opening,

(2) and (3) further developing into multi-chambered caves.

SHAW, R.B. RBAST: pp. 194–197, 1872.

Religious cairns of the Himalayan region.

The cairns found in the slopes of Dhaloa Dhar, in the plains and rocky valleys of Tibet and in the gorges of Kuenlun Mountains are concerned with some sort of Devi worship. They are not sepulchral monuments. Buddhists and Muhammadans disown them and show scant respect.

SIRCAR, D. C. MI: Vol. XXXV, pp. 31–38, 1955.

The Dravidian Problem.

The Indian megalith builders were Dravidians. They migrated into India via sea in the latter half of the First millennium B.C. No Dravidians were in the north. The Tribal area constituted an effective barrier between the northern Āryans and the southern Dravidians and this belt was gradually reduced due to expansion from north and south. The author refutes this postulation drawing extensive support from literature. The Indo-Āryans had no alphabet. They did not invent Brāhmi. This suggests that the Indus script from which Brāhmi is (in all probability) derived was used by the Dravidians. The author cites evidence for the fusion of Āryans and Dravidians and suggests that the racial and cultural fusion must have taken place outside India in Iran (possibly East Iran). He also believes that the people of Mohenjo-Daro and Harappa were speaking Dravidian languages.

SOUNDARA RAJAN, K. V. IA: 1956–57, p. 36.

Excavations at Nāgārjunakoṇḍa, District Guntur.

A megalithic stone circle enclosing an oblong pit covered by multiple capstones of cuddapah slabs was excavated. At the bottom of the pit was a slab cist covered with multiple slabs but no porthole or a floor slab which contained skulls and many long bones. The burial was secondary and disarticulate remains with the usual megalithic furniture *viz.* pots, iron implements etc. were found. [195]

SREENIVASACHAR, P. IA: 1958–59, p. 68.

Stone circle in District Hyderabad, Āndhrapradesh.

Discovered twenty-one stone circles at Koisaram, in Medchal Taluk and a group of thirty-five near Balajigutta.

SRINIVASAN, L. K. IA: 1960–61, p. 24.

Exploration in District Chanda.

Stone circles were observed near Dongargaon, at Chakvithalwada and Kukud Chimda. Menhir was also noticed near Ravi.

SRINIVASAN, K. R. RASMP: *Fasli*, 1348, (1938–39) pp. 3–5.

Archaeology.

The report conveys a short account of the results of the excavation of a megalithic monument at Tiruppur and some observation on a cist interment at Tayinipatti.

The excavation sheds interesting light on the method of burials. The bounding circles varied from ten to twelve feet in diameter. In the larger circles cists were found. Architectural details of transcepted cists with antechamber and porthole are embodied. The lower and upper portions of the nothern portion of the transcepted cist contained very few pots and iron objects while the southern portion entombed the bulk of the burial furnishings. Larger iron weapons were found placed on the floor and the smaller ones in the pots. All are inserted with point downwards. Some of the pots were covered with lime.

Five urn burials were opened. The urns had a granite slab covering. One monument enclosed two urns with a common capstone, which is rather unusual. In one such burial at Pulvayal it was observed that each urn enclosed the entire human skeleton in a squatting position holding a short bladed sword in one arm while the other rested on the thigh.

At Tayinippatti the situation of the antechamber on the western side of the main cist as opposed to the normal eastern side is noteworthy.

These burial sites are known in inscriptions of the thirteenth century as *Kurangupattarai* (workshop of monkeys) which convey to us that by this time people had become ignorant of this custom of the disposal of the dead.

SRINIVASAN, K. R. RSMP:* *Fasli*, 1349, (1939–40) pp. 2–12.

Four earthern ware vessels recovered from a megalithic site at Sinappanduranpatti were acquired to the museum.

At Kalasakkadu lying to the west of Tirukkattalai Village, Alangudi Taluk, stone circles enclosing urns were observed.

Megaliths at Annavasal, Sinappanduranpatti, Vattanakkurichi, Narangiyanpatti, Virudapatti, Poyyamani and Sokkanathanpatti were also examined.

SRINIVASAN, K. R. RSMP: *Fasli*, 1350, (1940-41) p. 14.

A burial site to the South of the Vellar railway bridge was discovered.

SRINIVASAN, K. R. RSMP: *Fasli*, 1351, (1941-42) pp. 6–7.

Kallukkulam urn burials.

A brief report on the burial site in the Kallukkulam waterspread in Kilaiyur – Vadakkupattu hamlet of Sendakkudi village is given. These cairns with urns inside recall those from Tiruk-

*Report on the Working of the State Museum, Pudukkottai.

kattalai. Some are multiple urn burials – three in a line. The cairn rubble consisted of broken laterite bits. The bounding stones were of natural laterite cut into a rectangular shape. The urns were of a coarse fabric decorated with a series of thumb nail impressions recalling the twisted chord design. The pottery obtained were thin and highly polished. A flat circular pottery piece resembled a coin. Similar things were obtained from excavations at Aivar Koil. [200]

SRINIVASAN, K. R. RSMP: *Fasli,* 1352, (1942-43) pp. 6–7.

Tenimalai prehistoric burials.

The site is located on either side of the road near here and the situation of a natural cavern nearby enhances the importance of the site.

Melur prehistoric burials.

Urn and cist burials among low-out crops were observed. The bounding boulders were of laterite and gneissic granite. In one case a stone slab was found covering an urn beneath.

SRINIVASAN, K. R. RSMP: *Fasli,* 1353, (1943-44) pp. 7–9.

This is a short observation on the megalithic burial sites at Melur, Annavasal, Puttambur and Killanur.

Melur : Here the stone circles enclosed cists and urns. In one of the disturbed circles an image of a Jain Thirthankara was found.

Annavasal : Cists and urn burials were noticed on the waterspread on the tank locally known as *Kuranguppattadi endal.* The circle boulders in one were of laterite and in others granite.

Similar megaliths were also noticed a little further away in the waterspread of Mudalikulam tank. A few menhirs were also observed. One such menhir measured nine feet in height and six feet ten inches in circumference at the bottom.

Puttambur : Monuments are similar to the above sites. The site has been entered as Kurangupattadi, Kalkuthu and Velankadu in the village revenue records.

SRINIVASAN, K. R. RSMP: *Fasli*, 1354, (1944-45) pp. 5-7.

(a) *Prehistoric burial site at Kadiyappatti.*

Discovery of remains of extensive urn field in the waterspread of Kadiyakkanmai at Kadiyappatti village is given. The bounding boulders were mostly of laterite with quartz and laterite rubble for cairn filling.

(b) *Prehistoric burial site – Firka Kilaiyur*

Notice is made of burials on either side of road No. 9 a little to the east of culvert 89. The site falls within the boundaries of Kilaiyur – Rasalippatti and Poyyamani villages.

SRINIVASAN, K. R. RSMP: *Fasli*, 1355, (1945–46) p. 5.

Field Archaeology.

Megalithic sites at Villappatti and Vadagupatti villages are noticed.

SRINIVASAN, K. R. PISC: p. 97, 1944.

Indian Megaliths with special reference to Pudukkottai.

All the resources needed for the Iron Age man are present in Pudukkottai. Stone circles, cairns, dolmens and cromlechs are abundant. Vedic Āryans or Indus people were not responsible for these. Tamil literature gives evidence of the practise of this cult from at least 1,000 B.C. The survival of this cult and the knowledge of iron among some primitive tribes in the South and Central India would suggest an earlier period probably 2,500 to 1,000 B.C. An Egyptian origin for this cult is also indicated.

SRINIVASAN, K. R. AI: No. 2, pp. 9–16, 1947.

The Megalithic burial and cairn fields of South India in the light of Tamil literature and tradition.

The author gives extensive reference from Tamil inscriptions and Tamil literature *viz.* Tolkappiam, Sangam literature etc. for the practice of megalithic and urn burials in South India. Special mention can be made to the reference of

the five kinds of burials mentioned in *Maṇimekalai*, a Sangam work. Sangam literature dates from the third century B.C. The beginning of the megalithic and urn burial culture is to be found in the pre-Sangam age and earlier than the effective Āryan impact on South Indians. The predominance of Vedic ritual combined with the misconception about the urns found in works of the eleventh century A.D. would indicate a terminus quo which, perhaps, set in the fifth century A.D. [205]

SRINIVASAN, K. R. TASSI: 1958–59, pp. 1–14.

The Megalithic monuments of South India, Literature and tradition.

Defining the different types of megaliths the author observes that the nature of the grave goods particularly the wheel made Black-and-red ware plus the iron implements are the linking features between the types. The Southern Indian megaliths are sepulchral. He recapitulates the existing evidences for dating them. Tamil literature especially the Sangam works mention the megalithic burial customs and the author quotes profusely from them. He also shows how the local names for these get transformed in usage and give an entirely different meaning from its original import. The monuments bear witness to a highly advanced state of civilization with knowledge of iron and community living. He also recounts Haimendorf's views as to the authors of these megaliths and their possible routes of migration, chronology, etc.

SRINIVASAN, K. R. JMU: Vol. XXXII, No. 1, pp. 131–198, 1960.

Some aspects of religion as revealed by early monuments and literature of the South – The Megalithic cult.

The megaliths are mute witnessess for the great veneration and devotion to the dead and the belief in post mortem life. Sangam works are full of references to the funerary and memorial monuments. The author quotes extensively from these works and gives in one instance a new interpretation for the lying-in-state, exposure to elements and final collection and washing of

bones for ultimate burial (*Tolkappiam Paruladikaram* 2 : 5). References to memorial stones are also made.

SRINIVASAN, K. R. and BANERJEE, N. R. AI: No. 9, pp. 103–115, 1953.

Survey of South Indian megaliths.

A rapid survey of the work done on South Indian Megalithic burials – previous work, recent explorations, types, results of the recent excavations etc. is made. The monuments are to be found on rocky high grounds unfit for cultivation and near irrigation tanks. The homogeneity of burial furnishing of the Adichanallur urn interments bring them into the fold of megalithic culture. In determining chronology and literature (Tamil Sangam) coins, pottery, beads and stratigraphy are taken into account. The authors recount Haimendorf's arguments for identifying the megalith builders with the Dravidians. The beginning and end of this culture on the Indian soil is an unsolved problem.

SRIVATSA, L. K. IA: 1959–60, p. 72.

Megaliths in District Chanda.

Discovery of two stone circles at Sindhla in Chanda Tahsil are noticed.

SUBBA RAO, B. PISCA: p. 211, 1950.

Prehistoric and Protohistoric Bellary.

Bellary region occupies an unique position in the lower Deccan permitting cultural migrations. The excavations at Sanganakallu by the writer and at Brahmagiri by Dr. R.E.M. Wheeler have enabled correlation of the prehistoric and early historic cultures in the heart of the Deccan. [210]

SUBBA RAO, B. The Personality of India, pp. 117–123, 1958.

The early historic period and the megalithic problem.

The megalithic complex is linked with the Black-and-red ware and iron. The basic form in Black-and-red ware both in South and Central India are common but the southern

ones show a tendency towards elongation and development of pointed bases. No independent origin for both could be postulated. Further, iron and Black-and-red ware are not earlier in Southern India. Types of weapons are also common. Ample evidence go to show that iron and Black-and-red ware came into the South together. The author also indicates future line of research, *viz.* the necessity for separating the pottery and the megalithic ritual, the nature of the North Indian megaliths: the possible finding of megalithic burial complex without Black-and-red ware in the South and finally to look for contact of pottery and ritual in Central India.

SUBBA RAO, B. TASSI Silver Jubilee Vol. 1962, pp. 132–151.

Megalithic Problem of South India and the Dravidian Languages.

The Dravidian problem is closely linked with that of the megaliths.

But for the complex burials the whole of Peninsular India, Gujarat, Malwa and Orissa have a common material culture, pottery, tools and weapons typical of Indian Iron Age Culture. Affinities in fabrics and the continuity of the so-called megalithic and non-megalithic areas with the same type of pottery, Black-and-red ware would not favour two diverse origins for this ceramic industry.

The fact that these people embraced the grave goods of Central and Western India would indicate that the megalithic cult was adopted or introduced into South India by the people who had already come into contact with Iron Age people of Northern and Central India. Maritime movement theory is not plausible.

If we think of a terrestrial movement evidences point to a migration from north and south.

Discussing the eastern origin for the megaliths, Dr. Subba Rao feels that Central and South India were a meeting place of ideas and cultures from the east as well as the west.

Grave goods are the crucial evidence for the solution of problems pertaining to megaliths. Only the discovery of a

pre-Black-and-red and pre-Iron megalithic cult in South India would warrant an earlier date and the postulation of a direct maritime migration.

The Professor recounts factors pointing to a folk movement of this people and the direction from north to south.

Dravidian words in the Ṛgveda attest the presence of the Dravidians in North-Western India at that period.

Linguistic evidence proves that there has been mutual assimilation of words between Dravidian and Sanskritic languages.

Skeletal remains from Adichanallur confirms the affinities of the megalithic builders with the Dravidians. According to Dr. Sarkar those from Brahmagiri megaliths are Irano-Scythian and are close to the general element of South India.

Megalithic Iron Age people did not evolve out of the earlier Neolithic stock.

Iron was brought with the Black-and-red ware into the South. Solution is this particular ware. Black-and-red ware in Ahar, Rājasthan can be dated earlier to 1,500-1,200 B. C. This ceramic tradition spreads in time and space and has become one of the constituent elements of the Early Historic cultures of the Gangetic Basin.

Although sparse in Malwa, this becomes dominant in Iron Age replacing other elements.

As one moves south the forms get elongated and new specialised ceramic forms appear. There is homogeneity in this ware and we are not justified in distinguishing between megalithic and non-megalithic wares. These two main material constituents, the Black and-red ware and iron, came from the north.

The occurrence of megaliths in the north and definite evidence from certain types of burials connect the megalithic culture with the Black-and-red ware.

The Dravidian language in Central and Western India became extinct as evidenced by the Mahārāṣṭrians adopting Āryan languages though retaining other Dravidic elements.

The author identifies the Dravidian elements by the distribution in space and time of the Dravidian languages and the earliest identifiable characteristic element of the Dravidian speaking people *i.e.* the Black-and-red ware and Iron.

Postulating a new theory of Dravidian origin Dr. Rao says that "the Dravidians seem to have moved southwards and eastwards from Rajasthan across Central to South India. They put an end or succeeded the chalcolithic communities in those regions, by about 500 B.C. or a little later, they managed to spread to the extreme of South India."

SUBRAHMANYAM, R. IA: 1957–58, p. 5.

Excavation at Nāgārjunakoṇḍa, District Guntur.

Excavation of megalithic stone circles are noticed.

SUBRAHMANYAM, R. IA: 1958-59, p. 6.

Excavation at Nāgārjunakoṇḍa, District Guntur.

A stone circle enclosing an oblong pit contained partly disarticulated human skeletal remains besides usual furnishings.

SUBRAHMANYAM, R. IA: 1959-60, pp. 6-9.

Excavation at Nāgārjunakoṇḍa, District Guntur.

Brief description and finds therein of twelve of the eighteen megalithic burials excavated is given. All of them were enclosing pits excepting one which surrounded an oblong cist.

The cist (megalith VII) had no porthole and was covered by multiple capstones, and on the floor human bones were found. Structure and furnishing in the pit circle was homogeneous. Noteworthy feature is the ash or lime and earth, laid as a sort of cushioning for the overlying bones. The grave furnishings were similar to those found in the megalithic burials *viz.* pots, iron objects and beads. In megalith XII, besides human remains and other furnishings, was also found an articulated bovine skeleton whose skull was cut slightly above the upper teeth portion on the alveolar margin indicating a sacrifice.

In megaliths XIV and XV were found fully extended and articulated human skeletons (female in the former with spiral

ear-rings made of gold wire near the ear lobe and thirty-five gold beads and eighteen silver spacing beads in the neck region). In some, animal bones were also found. [215]

SUNDARA, A. IA : 1958-59, p. 32.

Exploration in District Bijapur.

Discovery of megalithic stone circles at Chikamannur is mentioned.

SUNDARA, A. IA: 1960-61, p. 28.

Exploration in District Bijapur.

Discovery of stone circles at Madnahalli, Maskanal, Salvadgi and Talikot are mentioned. One of the stone circles at Maskanal enclosed a cist burial.

SWAMINATHAN, V. S. PISCA: p. 266, 1925.

Prehistoric Geology or Prehistory of the Chingleput and North Arcot Districts.

Stratigraphical position of the occurrence of the vestiges of man is necessary to decide their antiquity. The author discusses the age of the laterite in which most of the antiquities are found. He also mentions the chief places where palaeoliths, neoliths, prehistoric burials etc. occur. In conclusion definite sequence of the various cultures is established tentatively.

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TAYLOR, M. JBRAS: Vol. III, part 2, pp. 179—196, 1851.

Ancient Remains at the village of Jiwarji near Ferozabad on the Bhīma.

The author points out the similarity between the Nilgherry, Deccan and European megaliths (Cromlech, Kistvaens etc.)

At Jiwarji the diameter of the cairn varied from forty feet to sixty-eight feet. Some had double circles. The author excavated four monuments of which one seems to be a pit circle and others cists. They contained stone chests or coffins. In one there was a double chest with a skeleton in each. The length of the skeletons

were five feet seven inches, five feet five and a half inches in one and five feet two inches and five feet in another. In the other two only fragments of bones were found. A single broken skull outside the stone chest in one cairn leads the author to suggest some sort of sacrificial killing. The furnishing were the usual megalithic pottery, iron spearhead, tripods and piece of sword.

Concluding the author says that cromlechs are similar to those found in Europe and Nilgherry. They are temples or altars for the performance of sacrifices or ceremonies.

Kistvaens or closed cromlechs are also identical with those of Great Britain and the Nilgherry. These are sepulchral. No idols or images were found in these cairns. Barrows are invariably found with single or double bounding stone circles. They contain stone chests or coffins and are sepulchral.

The authors of these were nomadic tribes of Druidic Scythians who came to India very early.

TAYLOR, M. JBRAS: Vol. IV, p. 380–429, 1853.

Notices of Cromlechs, cairns and other Ancient Scytho-Druidical Remains in the Principality of Sorapur.

Cromlechs, kistvaens, cairns and rocks planted in diagonals (avenues) are defined. A detailed account of the remains at Haggaritgi, Rajan-Kolur, Belsettihal, Chikanhalli, Shahpur Hills, Ijeri, Mandewalli, Jiwargi, Andola, near Kosgi, Yemmigudda, in the vicinity of Hyderabad and Gurmatkal is given. The author compares the monuments here with those in Europe and England and concludes that these are the vestiges of Celto-Druids and Celto-Scythians.

Commenting upon the remains inside a cairn at Chikanhalli the author says, these belong to a sect who burned their dead and buried their ashes, and further observes that these may be the same sect as those who built kistvaens for the same purpose.

Excavating a tumulus at Shahpur the author remarks that the mound was built up by the successive cremations in great

number, as evidenced by the several layers of ashes, bones, charcoal etc. intervened by a thin layer of soft greyish earth.

Avenues were found at Shahpur, Vaibathpalli and Ijeri.

Some of the cromlechs, were small houses of nomadic tribes, while those half buried and with bounding circles were sepulchral vestiges.

Additional proof of the Celto-Scythic association for these monuments is found in that the Tamil language has affinities with that of the Todas and again with the Tartar dialects. [220]

TAYLOR, M. TRIA: Vol. XXIV, Pt. iii, Antiquities, pp. 329–362, 1862.

Description of cairns, cromlechs, kistvaens and other Celtic Druidical or Scythian monuments in Dekhan.

The author excavated many megalithic tombs which he associates with Celts, Drudis and Scythians and this paper embodies the results of his researches. The monuments, cromlechs, kistvaens, stone circles etc. opened were found at Rajan Kolloor, Hegaratgi, Belsettee Hill, Yemmeegooda, Jiwarji, Andola, near Shapoor, Vibathulli, Toljapoor, Ijeyeri and Munduvalle.

At Hegaratgi he found ashes and partially calcined bones in in an urn.

At Jiwarji he found full skeletons buried inside the cairns. From the evidence obtained he postulates some persons were beheaded and the corpses buried, suggestive of human sacrifice. In one cairn in the earth above the cist several skeletons were found, all in a jumbled position. At Andola he got bones of Iguana and dogs.

The Shahpoor parallelogram of rocks, is believed by Capt. Taylor to be a cremation ground for the whole district where the excavation of a tumulus revealed partially burnt bones, charcoal and potsherds. The mound is due to successive cremations.

Conclusions arrived at by the author from this enquiry are:

Cromlechs or open monuments with and without circles of stones contain no remains.

Kistvaens with and without circular perforation in a side slab and with or without covering slabs contain human ashes, bones and broken pottery.

Cairns and barrows with single, double and treble circles of rocks and stones contain ashes etc. and skeletons with traces of human sacrifice, pottery, arms etc. Others with cinerary urns interred in them without cists. He also classifies the ancient people into two types, *viz*:

(i) those who buried their dead with attendant sacrifice in cairns, and

(ii) those who buried their dead without sacrifices and interred their ashes collected in urns in kistvaens and cairns.

[These three papers have been collected and published in a book form - *Megalithic tombs and other Ancient Remains in the Deccan* by the Archaeological Department, Hyderabad State, in 1941].

THAPAR, B. K. AI: No. 8, 1952, pp. 3-8.

Porkalam 1948 - Excavation of a Megalithic Urn Burial.

A monument common to Tamilnād and Kerala was tackled. Porkalam yielded etched carnelian beads the designs on them being similar to some dated ones (first century A.D.) elsewhere. Two beads of Porkalam, exhibiting rough affinities with those from Bhir Mound (Taxila), would also support this dating which would also agree with the terminal date obtained at Brahmagiri.

The report includes the description of the monument, pottery and other finds brought to light, *viz.* pots of black, Black-and-red, and red ware placed both inside and outside the urn, iron implements, terracotta beads, etched carnelian beads etc. Pottery was wheel made and salt glazed. Of particular interest are the four legged ones.

THAPAR, B. K. AI: No. 13, 1957, pp. 4–142.

Maski 1954, a Chalcolithic site of the Southern Deccan.

Excavations at Maski revealed that the earliest chalcolithic culture was succeeded by the megalithic folk, who were intruders—

indicated by the lapse of overlap between the chalcolithic and the megalithic people. The megalithic cuture is dated from *C.* 200 B.C. to middle of the first century A.D., with a reasonable margin of a century on the earlier side.

Apart from menhirs five class of burials were confronted with.

Burials B (i) to B (iv) though belonging to South Indian megalithic complex revealed new features *viz*.

(i) burials occurred in the habitation area itself,

(ii) complete skeleton buried in extended and articulated position,

(iii) N-S orientation of the major axis of the grave pits, and

(iv) Use of lime or ash on the pit floor.

The author gives the structural details of the burials. While B (i) and B (ii) were essentially the same the latter differed in orientation and in the fractional burial, B (iii) was an urn burial without any lithic appendage and bounding circle, B (iv) was a pit burial (extended) and demarcated by a stone circle, B (v) recalled the pit circles of Brahmagiri.

The burial furnishing consisted of the usual megalithic Black and red pottery (black was absent) and iron objects. The excavated Menhir did not reveal any sepulchral association.

Pottery from all the burials was identical in fabric and technique. It was burnished or polished. Decorations were finger impressions. Each burial presents some common forms which links with the other and confirms the unity of the class of burials. The quality and characteristic forms recall those of Adichanallur, Amirthamangalam, Perumbair, Brahmagiri, Sanur and other megalithic sites.

TURNER, H. G. Ind. Ant. Vol. VIII, p. 207, 1879.

Cromlechs.

Well preserved cromlechs occur on the southern slopes of the Aneimallies (Anamalai) Hills. Menhirs or groups of upright stones are observed.

REVIEWS

Studies in Indian Cultural History: Volume I. By P. K. Gode. V. I. Series 9. Visvesvaranand Vedic Research Institute, Sadhu Ashram P.O. Hoshiarpur, 1961. pp. 495, Price Rs. 30.

The late Dr. Parasuram Krishna Gode was an Indologist of great renown; he was a zealous inquirer into the origin of customs and fads of current times, and fortunately was a prolific writer. His periodical writings would constitute seven volumes, each of considerable bulk and these are being planned to be brought out. The present volume containing fifty of Dr. Gode's articles bearing on cosmetics, perfumes, *tāmbūla* and Indian plants, has been published by the Visvesvaranand Vedic Research Institute as the ninth volume in their Indological Series. It has seen the light owing to the interest of the Institute's Director, Visvabhandu Sastry who was a personal friend of Dr. Gode, and also his admirer. It is to be hoped that the other projected volumes will soon be published.

The present volume contains fifty-one articles in all. The first twelve trace the history of cosmetics and perfumery in India from ancient and mediaeval times—the publishers have collectively styled this group of articles as the Indian *Gandha Śāstra*. The next ten articles (pp. 13-23) deal with the origin, use and accessories of *tāmbūla* in India. The author has taken great pains to collect and collate references from inscriptions, from *Dharmaśāstra* texts and from the secular literature of the post-Christian centuries. There is an interesting article on the "nut-cracker" (pp. 171-180), and another on the 'spittoons ' (pp. 181 f). The bulk of the volume, however, treats of the Indian plants like gram (*caṇaka*), maize, jawar, fig, sandal, mendi and so on. The articles on plant-grafting (pp. 439 f) and on the grafted mangoes (pp. 452 f) make very interesting reading. However, the author treats at very great length on tobacco: references to the employment of tobacco as a stimulant have been culled out from Sanskrit works dated 1600 A.D. onwards. The set of four articles (pp. 45-48) are greatly illumining. The short note on, 'tea' (p.370 f) is likewise fascinating.

Each article is a masterpiece of research. Wide and intimate acquaintance with a variety of branches of literature, both sacred and secular is at once in evidence in all these essays. There are extensive references to the original sources and a peculiarity is that the citations are made to speak for themselves. It is rather infrequently that attempt towards interpretations is made anywhere in this huge book. The scientific rigour of the method followed as well as the scholastic modesty of the author is responsible for this feature of the book.

The book beyond doubt marks an epoch in indological research in our country. The contributions are solid and comprehensive. In an age when serious application is sorely lacking, Dr. Gode's writings are illustrations of perfection in research methodology. The topics that have engaged Dr. Gode's attention in this volume have a value of their own : they are all of contemporary interest.

The appetite to know more about the things we commonly use and about which we know so little is amply whetted by this remarkable volume.

The book has been got up excellently, proofs have been passed exceedingly carefully and diacritical markings are correct in every case—which is indeed unusual in publications of this type these days. The authorities of the Visvesvaranand Vedic Research Institute deserve high praise and sincere gratitude for this scholarly publication.

S. K. Ramachandra Rao